

**ALPHABETICAL INDEX
TO THE COMMERCE CONTROL LIST**

This index is not an exhaustive list of controlled items.

Supplement No. 4 to Part 774 – Commerce Control List Order of Review
identifies the steps to follow when reviewing the Commerce Control List.

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CVD (Chemical vapor deposition) equipment	2B005.a
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Description	ECCN Citation
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Detection equipment, radiation	1A004, 1A995 or 1A999.a
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Detonators, exploding bridge (EB)	1A007
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Diamond cutting tool inserts, single point	2B998.b
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Finishing machines, gear	2B003
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Description	ECCN Citation
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Description	ECCN Citation
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Liquid-liquid exchange columns, for lithium amalgams	1B233.b.1
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Description	ECCN Citation
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Description	ECCN Citation
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Maraging steel.....	1C216
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Description	ECCN Citation
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Masks, integrated circuits of 3A001	3B001.g
Masks, mask substrates, mask-making equipment	3B991.b.2
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Microprocessor microcircuits above 530 MTOPS development/production technology.....	3E002.g
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Microwave modules.....	3A001.b.2
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Description	ECCN Citation
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Military commodities.....	0A919
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Mobile communications equipment, assemblies and components	5A991.g
Modeccin toxin	1C351.d.10
Modeling/simulation of guidance sets, software	7D103
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Monel equipment including valves, piping, tanks and vessels	2B999.f
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Monitoring equipment, radiation	1A999.a
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Description	ECCN Citation
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Monolithic integrated circuit repair or trimming laser equipment.....	3B991.b.1.m
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Multi-data-stream processing equipment, development or production technology for	4E993.b
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Mycoplasma capricolum subspecies capripneumoniae ("strain F38")	1C352.b.1.b
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N,N-diisopropyl-beta-aminoethane thiol	1C350.b.6
N,N-diisopropyl-(beta)-amino ethanol	1C350.b.8
N,N-diisopropyl-beta-aminoethyl chloride.....	1C350.b.9
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NBC (Nuclear, biological and chemical) detection system software	1D003
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NN-Diphenylurea (unsymmetrical diphenylurea)	1C018.b
Nanocrystalline alloy strips.....	1C003.c
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Navigation, airborne communication and other avionics software	7D004, 7D994, 0D521 No. 2

Description	ECCN Citation
Navigation direction finding equipment	7A004-7A008, 7A103-7A105, 7A994
Navigation systems, equipment & components, inertial	7A103
Navigation systems, equipment & components, inertial	7A003
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NDT (non-destructive test) inspection equipment (3D)	1B001.f
NDT (non-destructive test) inspection equipment	9B007
Neodymium lasers	6A005.d.6
Neodymium lasers	6A205.f
Network analyzers	3A002.e
Network access controllers contained in computer equipment	4A994.i
Network access controllers contained in telecommunications	5A991.b.4.a
Neural computers/assemblies/components	4A004.b
Neural network integrated circuits	3A001.a.9
Neutron generator systems & tubes	3A231
Neutronic calculations/modeling, software for	0D999.a
Newcastle disease virus	1C352.a.9
Nickel alloy	1C002.a.2.a
Nickel alloy/powder or particulate form	1C002.b.1.a
Nickel aluminides	1C002.a.1.a
Nickel based alloys	1C002.a.1
Nickel electroplating equipment	2B999.i
Nickel metal (made from powder)	1C240
Nickel powder	1C240
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Night vision technology	6E002 or 6E101
Niobium alloys	1C002.a.2.b
Niobium alloy/powder or particulate form	1C002.b.1.b
Nipah virus	1C351.a.25
3-Nitroaza-1,5 pentane diisocyanate	1C018.l
Nitric acid	1C999.e
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2-Nitrodiphenylamine	1C111.c.3 or 1C018.h
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Nitroglycerin (in medicinal form)	1C992.l
Nitroguanidine	1C011.d
P-Nitromethylaniline	1C018.i
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chlorides and corresponding protonated salts	1C355.a.2.d
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts	1C355.a.2.e
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiols and corresponding	

Description	ECCN Citation
protonated salts	1C355.a.2.f
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides	1C355.a.2.b
Noise reduction equipment for vessels, acoustic mounts	8A002.o.3.a
Noise cancellation systems for vessels, active.....	8A002.o.3.b
Noise reduction systems for vessels, active.....	8A002.o.3.b
Non-destructive inspection equipment	1B001.f
Non-destructive test inspection equipment, rocket motor	9B007
Non-fluorinated polymeric substances	1C008
Non-fluorinated polymeric manufactures	1A003
Non-irritant smoke flares, canisters, grenades and charges	1A984
Non-linear optical materials.....	6C004.c
Non-planar absorbers	1C001.a Note 1.b
Non-tunable continuous wave (CW) lasers	6A005.a or 6A995.e
Non-tunable pulsed lasers	6A005.b or 6A995.d
Non-tunable solid state lasers	6A005a or b or 6A995.f
Nozzles, for producing pyrolytically derived materials.....	1B116
Nozzles, rocket motor (liquid)	9A106.b
Nuclear material handling and processing equipment	2A291
Nuclear materials, facilities, and equipment software	0D001
Nuclear plant commodities, parts and accessories.....	2A291.d
Nuclear reactor, eddy current test equipment	2A291.d
Nuclear reactor equipment.....	2A291
Nuclear reactor, simulators	2A291.b
Nuclear reactor, ultrasonic test equipment.....	2A291.d
Nuclear reactors fuel element (irradiated) reprocessing plant/equipment	0B006
Nuclear technology for the development, production or use of nuclear materials, facilities, and equipment	0E001
Numerical control for machine tools - software	2D002 and 2D003
Numerical control for machine tools - technology	2E003.d
Numerical control units for machine tools and numerically controlled machine tools, n.e.s.....	2B991
Numerically controlled machine tools	2B290
Numerically controlled machine tools that can be equipped with electronic devices for simultaneous contouring control.....	2B991.c
Object detection and location systems or transmitting and receiving arrays (acoustic).....	6A001.a.1.b
Ocean salvage systems.....	8A001.e
Off highway wheel tractors.....	9A990
Oil well cartridges.....	1C018.f or 1C992.g
Oil, lubricating, cutting, or quenching	1C980
Oils, distillate fuel.....	1C980

Description	ECCN Citation
Omsk haemorrhagic fever virus.....	1C351.a.26
On-highway tractors.....	9A990
Operating systems for real time processing equipment, software	4D993.c
Operating system software for real time processing equipment.....	4D993.c
Optical absorption materials, low	6C994.a
Optical components, space-qualified	6A004.c
Optical components for lasers.....	6A005.e
Optical components for lasers.....	6A004.b
Optical computers	4A004.c
Optical control equipment.....	6A004.d
Optical detectors, radiation hardened	6A102
Optical detectors & sensors	6A002
Optical element inspection or testing equipment and components.....	3B992.a
Optical element manufacturing equipment and components.....	3B991.a
Optical elements, aspheric	6A004.e
Optical equipment.....	6A005.f
Optical equipment.....	6B004
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Optical fabrication technologies	6E993.a
Optical fiber characterization equipment.....	5A991.b Note b.3
Optical fiber couplers or connectors for underwater use	8A002.c
Optical fiber & accessories, communications.....	5A001.c
Optical fiber preforms.....	6C994.b
Optical fiber preforms.....	5C991
Optical fibers/fiber cable, sensing.....	6A002.d.3
Optical fiber sensing elements, hydrophones	6A001.a.2.a.2
Optical filters	6A994.a
Optical filters technology.....	6E993.b
Optical finishing processes	2B002.d
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Optical integrated circuits.....	3A001.a.6
Optical materials	6C994
Optical materials, with non-linear characteristics.....	6C004.b.3
Optical mirrors (reflectors)	6A004.a
Optical mirrors (reflectors)	6A005.e.2
Optical sensing fibers not controlled by 6A002	6C992
Optical Sensors	6A992
Optical sensor cryocoolers.....	6A002.d.1
Optical sensors - flight control systems - technology.....	7E004
Optical sensors, optical fiber.....	6A002.d.3

Description	ECCN Citation
Optical sensor materials	6C002
Optical sighting devices for firearms	0A987
Optical surface coating/treatment technology	6E003.d.1
Optical switching equipment	5A991.c.10.c
Optical switching equipment, technology for the development of equipment employing	5E001.c.3
Optical-electro shutters, Kerr or Pockel cells	6A203.b.3.c
Optics	6A994
Optics, (optical components)	6A004
Optimization of rocket systems trajectory technology	7E104
Organic fibers & filamentary materials	1C010.a
Organic matrix	1A002.a
Organo-metallic compounds	3C003
Oropouche virus	1C351.a.27
Oscillators or oscillator assemblies	3A001.b.10
Oscilloscopes (analog and digital)	3A292
Oxide matrix reinforced materials	1C007.f
Oxygen Iodine (O ₂ -I) laser	6A005.d.5.c.1
PABXs (Private Automatic Branch exchanges)	5A991.c
Packet switching equipment	5A991.c.10
Parachutes, military	9A610.h
Paraffin wax	1C980
Parametric technical databases	1E002.g
Particle accelerators	1B999.b
Particle flow detection microphone	6A005.g
Particle measuring systems employing lasers	3B992.b.7
Passive coherent location systems or equipment	5A001.g
Passive sensors, direction finding systems	7A115
Passive acoustic systems	6A001.a.1.d
Pathogens, genetically modified microorganisms	1C353.a
Pathogens, animal	1C352
Pathogens, human	1C351
Pathogens, plant	1C354
Pathogens, zoonotic	1C351
PBAA (Polybutadiene-acrylic acid)	1C111.b.3
PBAN (Polybutadiene-acrylic acid-acrylonitrile)	1C111.b.4
PEEK (Polyether ether ketone)	1C998
PEK (Polyether ketone)	1C998
PEKEKK (Polyether ketone ether ketone ketone)	1C998
PEKK (Polyether ketone ketone)	1C998
1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (382-21-8) (PFIB)	1C355.a.1.a

Description	ECCN Citation
Perfluoroaliphatic-ethers, monomeric or polymeric	1C006.d.1.a
Perfluoroalkanes	1C006.d.1.d
Perfluorocycloalkanes	1C006.d.1.c
Perfluoropolyalkylether-triazines, monomeric or polymeric	1C006.d.1.a
Performance improvement software, navigation systems	7D003.a
Performance improvement source code, navigation systems	7D003.b and 7D004
Peronosclerospora philippinensis (a.k.a. Peronosclerospora sacchari)	1C354.b.7
Peste des petits ruminants virus	1C352.a.10
Petroleum products produced or derived from Naval Petroleum Reserves	1C982
Petroleum, crude or reconstituted	1C981
PFIB (1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (382-21-8)	1C355.a.1.a
Phased array antennae (in radar)	6A008.e
Phased array/segment mirror control equipment	6A004.d.4
Phased array antennae (in radar)	5A001.d
Phased array antennae	5A991.f
Phenylene, as lubricating fluids	1C006.b.1
Phoma glycinicola (formerly Pyrenochaeta glycines)	1C354.b.12
Phosgene: Carbonyl dichloride (75-44-5)	1C355.b.1.a
Phosphate glass	6C004.e
Phosphor bronze or copper mesh packings	1A226
Phosphor image plates, storage	1A999.b
Phosphorus hydrides	3C004
Phosphorus oxychloride	1C350.c.3
Phosphorus pentachloride	1C350.c.4
Phosphorus pentasulphide	1C350.d.10
Phosphorus trichloride	1C350.c.5
Photo-enhanced CVD equipment	3B991.b.1.i
Photo-enhanced diffusion equipment	3B991.b.1.g
Photo-optical step and repeat cameras	3B991.b.2.d.1
Photocathodes	6A002.a.2.c
Photographic still cameras, underwater	8A001.e
Photographic still cameras, for underwater use	8A992.b
Photomultiplier tubes	6A202
Photovoltaic arrays, space qualified or radiation hardened	3A001.e.4
Physics-based simulation “software” specially designed for the “development” of lithographic, etching or deposition processes	3D003
Piezoelectric polymer & copolymer, made from vinylidene fluoride materials	1A001.b
Piezoelectric sensing elements, hydrophones	6A001.a.2.a.2.b
Pinacolone	1C350.d.11
Pinacolyl alcohol	1C350.b.18
Piping, austenitic stainless steel	2B999.n

Description	ECCN Citation
Piping, fittings and valves of or lined with stainless steel, copper-nickel alloy or other alloy steel	2A292
Piping, monel	2B999.f
Piping, multi-walled incorporating a leak detection port.....	2B350.h
Piping, stainless steel	2B999.g
Piping, vacuum	2B999.k
Pitch-impregnated fibers.....	1C010.e
Planar absorbers	1C001.a Note 1, c or d
Plant pathogens, bacteria or fungi.....	1C354
PLAs (Programmable Logic Arrays)	3A001.a.8
Plasma atomization & melting furnaces	2B227.b
Plasma dry etching equipment.....	3B001.c
Plasma-enhanced CVD (PECVD) equipment	3B991.b.1.i
Plasma enhanced or plasma assisted CVD production equipment.....	2B005.a.1.c
Plasma spraying production equipment, with controlled atmosphere	2B005.d
Platforms, complete	9A992, 9A610.h
Platinized catalysts.....	1A225
Plutonium metal production systems	0B006.g
Plutonium nitrate conversion systems	0B006.f
Pocket cell electro-optical shuttering.....	6A203.b.3.c
Police helmets and shields	0A979
Polyarylene ketones	1C008.d
Polybiphenylenethersulphone	1C008.f
Polybromotetrafluoroethylene	1C006.c.3
Polybutadiene-acrylic acid (PBAA)	1C111.b.3
Polybutadiene-acrylic acid-acrylonitrile (PBAN).....	1C111.b.4
Polycarbosilazanes.....	1C007.e.3
Polychlorotrifluoroethylene	1C006.c.2
Polycrystalline alumina fibers	1C010.c Note 1
Polycrystalline silicon and materials production equipment	3B991.b.1.a
Polydiorganosilanes, precursor for silicon carbide.....	1C007.e.1
Polyether ketone ether ketone ketone (PEKEKK).....	1C998
Polyether ketone (PEK)	1C998
Polyether ether ketone (PEEK).....	1C998
Polyether ketone ketone (PEKK).....	1C998
Polyetherimides, fibrous & filamentary materials composed of	1C010.d.1.a
Polygraphs.....	3A981
Polymeric or metallo-organic materials.....	1C007.e
Polymeric substances	1C111.b
Polymeric substances, non-fluorinated	1C008
Polymeric substances, non-fluorinated.....	1C998

Description	ECCN Citation
Polysilazanes, precursor for silicon nitride.....	1C007.e.2
Polythiophene	1C001.c.3
Porcine enterovirus type	91C352.a.11
Porcine herpes virus (Aujeszky' disease)	1C352.a.6
Porous nickel metal.....	1C240
Portable electric generator development or production software	2D994
Portable electric generators.....	2A994
Positioning equipment/components, global	7A005
Positioning equipment	7A105
Positioning systems, acoustic.....	6A001.a.1.d
Positioning tables or rate tables	2B120
Positioning tables or rate tables	2B121
Positive resists for semiconductor lithography.....	3C002.a.1
Post-flight data processing software	6D103
Potassium cyanide.....	1C350.d.12
Potassium bifluoride	1C350.d.14
Potassium fluoride	1C350.d.13
Potassium hydrogen fluoride see potassium bifluoride	1C350.d.14
Potassium titanyl arsenate (KTA).....	6C004.b.1
Potato Andean latent tymovirus (Andean potato latent virus).....	1C354.c.1
Powassan virus.....	1C351.a.28
Powder metallurgy rotor component manufacturing equipment	9B009
Power generating equipment, nuclear reactor.....	0A002
Power supplies, direct current high power (dc)	3A226
Power supplies, direct current high-voltage	3A227
Power systems, air independent, for underwater use.....	8A002.j
Power transmission shaft systems, marine.....	8A002.o.1
Power transmission shaft systems, marine.....	8A002.o.1.e
Precision mandrels for filament winding machines.....	1B201
Precision rotor forming mandrels	2B209.b
Precision tracking systems, usable for missiles	6A108.b
Precursors for toxic chemical agents	1C350
Preform production equipment	1B101.d
Preforms, metal coated, for fiber preregs in 9C110.....	9C110
Preforms production equipment.....	1B001
Preforms production equipment, n.e.s.	1B999.e
Preforms production equipment controlled by 1B999, software for	1D999.b
Preforms, fibrous or filamentary materials	1C010.e

Description	ECCN Citation
Preforms, glass for optical fibers	5C991
Preforms for space vehicles (metal coated fiber).....	9A110
Preforms, fibrous or filamentary materials	9A110
Preforms, metal coated fiber (for propulsion systems).....	9A110
Prepreg production equipment	1B001.e
Prepreg production equipment.....	1B101.d
Prepregs production equipment, n.e.s.	1B999.e
Prepregs production equipment controlled by 1B999, software for.	1D999.b
Prepregs, fibrous or filamentary materials.....	1C010.e
Prepregs, resin impregnated fiber, for 9A110 items	9C110
Prepregs production equipment	1B001
Prepregs, when impregnated with phenolic or epoxy resins.....	1C010.e Note 2
Prepregs, fibrous or filamentary materials	9A110
Presses, hot isostatic	2B204
Presses, hot isostatic	2B104
Presses, hot isostatic.....	2B004
Presses, hot isostatic n.e.s.	2B999.a
Pressure transducers.....	2B230
Pressure regulators, air cylinders, hoses, valves and backpacks.....	8A992.h
Pressure sensors, manganin & quartz	6A226
Primary cells and secondary cells.....	3A001.e.1.a or 3A991.j
Printed circuit boards for numerical control units, machine tools or feed	
back devices	2B998.c
Private automatic branch exchanges (PABXs).....	5A991.c
Probing (test) systems, semiconductor devices	3B002.d
Process control instrumentation, for reprocessing plant.....	0B006.d
Process control hardware/systems designed for power industries.....	1B999
Process control hardware/systems designed for power industries	
controlled by 1B999, software for	1D999.a
Process control systems for use in nuclear reactor equipment	2A290.b
Process control systems for use in nuclear material handling and processing	
equipment.....	2A291.a
Processing equipment for bay or bottom cable systems	6A001.a.2.e.3
Processors, digital array	3A001.a.3 Note
Processors, digital signal.....	3A001.a.3 Note
Processors, digital signal.....	4A003
Processors, digital array	4A003
Production facilities, reentry vehicles.....	9B116
Production equipment, propulsion systems & components.....	9B115, 9B619
Production equipment, reentry vehicles.....	9B115

Description	ECCN Citation
Production facilities, rockets/propulsion systems.....	9B116
Profilometers.....	7B002.b
Program proof and validation software for real time processing equipment.....	4D993
Programmable gate & logic arrays (FPGA's & FPLA's), field.....	3A001.a.7
Programmable & logic arrays (FPGA's & FPLA's), field	3A001.a.8
Programming controls for filament winding machines	1B201
Projectile accelerators	2B232
Projection image transfer equipment	3B991.b.2.g
Projection telescopes, laser diagnostics	6A005.f.4
Projectors, acoustic	6A001.a.1.c
Prolifometers, to characterize mirrors for laser gyro equipment	7B102.c
Propellant additives and agents.....	1C111.c
Propellants and constituent materials	1C111
Propellant control systems	9A106.d
Propellant (liquid) production equipment and components.....	1B115
Propellant (liquid) test and handling equipment and components.....	1B115
Propellant (solid) production equipment and components	1B117
Propeller blades or propfans composite technology	9E003.b.2, 9E610.y
Propeller noise reduction technology.....	8E002.a
Propeller noise reduction software.....	8D002
Propellers, contrarotating	8A002.o.1.b
Propellers, water screw	8A002.o.1
Propulsion equipment, nuclear.....	0A002
Propulsion systems/components, production equipment.....	9B115, 9B619
Propulsion systems, rocket.....	9A005
Propulsion equipment, underwater	8A992.j
Propulsion system components/structures, launch-vehicle.....	9A010
Propulsion system composite components/structures.....	9A110, 9A619.x
Propulsion system use software	9D101, 9D610.a
Propulsion systems, rocket.....	9A009
Propulsion systems, rocket.....	9A007
Propulsive substances	1C111.a
Protective and detection equipment	1A004, 1A995 or 2B351
Protective clothing, Independently ventilated.....	2B352.g.1
Protective suits, gloves, shoes.....	1A004, 1A995 or 2B352.g.1
Proximity focused image intensifier tubes.....	6A203.b.3.a
Pseudomonas mallei (Burkholderia mallei).....	1C351.c.5
Pseudomonas pseudomallei (Burkholderia pseudomallei)	1C351.c.6
Psychological stress analysis equipment	3A981
Puccinia graminis ssp. graminis var. graminis / Puccinia graminis ssp. graminis var. stakmanii (Puccinia graminis [syn. Puccinia graminis f. sp. tritici]).....	1C354.b.4

Description	ECCN Citation
Puccinia striiformis (syn. Puccinia glumarum).....	1C354.b.5
Pulsating Chemical Vapor Deposition production equipment.....	2B005.a.1.a
Pulse amplifiers.....	3A999.c
Pulse excited Q switched neodymium-doped lasers.....	6A205.f
Pulse generators, high-current for detonators.....	3A229
Pulse generators, high-speed.....	3A230
Pulse jet engines/components.....	9A111
Pulse radar cross-section measurement systems & components.....	6B008
Pulse shaping networks, high power.....	3A999.c
Pulsed electron accelerators.....	3A201.c
Pumpjet propulsion systems.....	8A002.p
Pumps, liquid propellant.....	9A106.d
Pumps, lithium amalgam.....	1B233.b.2
Pumps, mercury or lithium amalgam.....	1B233.b.2
Pumps, multiple-seal.....	2B350.i
Pumps, potassium amide in liquid ammonia.....	1B230
Pumps, seal-less.....	2B350.i
Pumps, vacuum.....	2B231
Pumps, vacuum.....	2B350.i
Pumps designed for industrial service.....	2B999.j
Pumps designed to move molten metals by electromagnetic force.....	2A293
Pyrolitic deposition nozzles.....	1B116
Pyrolitic deposition systems (“isostatic presses”, other than those controlled by 2B004).....	2B104
Pyrolitic deposition systems (chemical vapor deposition furnaces, other than those controlled by 2B005.a).....	2B105
Pyrolitic deposition systems, for rocket nozzles and reentry vehicle nose tips.....	2B117
Pyrolitically derived materials production technology.....	1E104
Pyrolized carbon-carbon components.....	1A102
Pyrolized carbon-carbon materials.....	1C102
Pyrolysis equipment, for rocket nozzles and reentry vehicle nose tips (“isostatic presses”, other than those controlled by 2B004).....	2B104
Pyrolysis equipment, for rocket nozzles and reentry vehicle nose tips (chemical vapor deposition furnaces, other than those controlled by 2B005.a).....	2B105
Pyrolysis equipment, for rocket nozzles and reentry vehicle nose tips (other than those controlled by 2B004, 2B005.a, 2B104, or 2B105).....	2B117
Pyrolysis process control equipment, for “isostatic presses”, other than those controlled by 2B004.....	2B104
Pyrolysis process control equipment, for chemical vapor deposition furnaces, other than those controlled by 2B005.a.....	2B105

Description	ECCN Citation
Pyrolysis process control equipment (other than those controlled by 2B004, 2B005.a, 2B104, or 2B105).....	2B117
Pyrotechnic articles, dual use.....	1A984
Pyrotechnic devices, commercial.....	1C018.j or 1C992.k
QRS11-00100-100/101 Micromachined Angular Rate Sensors.....	7A994
Q-switched lasers.....	6A005.a or b
Q-switched lasers.....	6A205.f
Quadrature-amplitude-modulation (QAM) based radio equipment operating above level 4.....	5A991.b.7.a
Quadrature-amplitude- modulation (QAM) based radio equipment operating above level 16.....	5A991.b.7.b
Quadrature-amplitude-modulation (QAM) based radio equipment.....	5A991.b.7
Quadrature-amplitude-modulation (QAM) based radio equipment, equipment for the development of.....	5B001.b.4.a
Quadrature-amplitude-modulation (QAM) based radio equipment, software for the development of.....	5D001.d.4.a
Quadrature-amplitude-modulation (QAM) based radio equipment, technology for the development of.....	5E001.c.4.a
Quantum cryptography.....	5A002.a.9
Quartz pressure sensors/transducers.....	6A226.b
3-Quinuclidinol.....	1C350.b.19
3-Quinuclidone.....	1C350.d.15
Radar cross section measurement systems, missile.....	6B108
Radar systems & components.....	6A008
Radar altimeters.....	7A106
Radar software.....	6D003.h
Radar systems, employing signal processing.....	6A008.h
Radial ball bearings.....	2A101
Radiation detection, monitoring and measurement equipment.....	1A999.a
Radiation hardened detectors.....	6A002
Radiation hardened detectors.....	6A102
Radiation hardened designed (or rated) robots.....	2B007.c
Radiation hardened electronic computers.....	4A001.a.2
Radiation hardened integrated circuits.....	3A001.a.1
Radiation hardened sensors.....	6A002
Radiation hardened TV cameras.....	6A203.c
Radiation hardened TV cameras not specified in 6A203.....	6A999.b
Radiation transport calculations/modeling, software for.....	0D999.b
Radiation sensors, optical fibers.....	6A002.d.3
Radiation shielding windows.....	1A227

Description	ECCN Citation
Radio frequency monitoring equipment	5A001.f.4
Radio frequency transmitting equipment.....	5A001.h.1
Radio equipment	5A001.b.2, 3 or 4
Radio equipment	5A991.b.6 or 7
Radio relay communications equipment.....	5A991.h
Radio, shortwave technology.....	5E001.c.4.c
Radio systems development/production technology	5E001.b.3
Radiographic detection equipment	1A999.b
Radiographic equipment	3A101.b
Radionuclides, alpha-emitting	1C236
Radionuclides, alpha-emitting, n.e.s.	1C999.g
Radium-226, compounds, mixtures, products or devices	1C237
Radome design software	6D003.h.2
Radomes usable in protecting missiles against nuclear effects	6A103
Ralstonia solanacearum, race 3, biovar 2.....	1C354.a.5
Raman shift lasers	6A205.e
Ramjet engines/components	9A011
Range gated illumination systems, underwater	8A002.d.2
Range instrumentation radars	6A108.b.2
Rankine cycle engine, air independent	8A002.j.1
Rate tables and positioning tables.....	2B121
Rate tables, positioning tables, and motion simulators.....	2B120
Rathayibacter toxicus.....	1C354.a.6
Reactor vessels, chemical	2B350.a
Real time processing	2D002.b
Real time processing operating systems	4D993.c
Real time processing equipment operating system software	4D993.c
Real time processing proof and validation software.....	4D993
Receivers, microwave test	3A002.f
Receivers, radio.....	5A001.b.2, 3 or 4
Reciprocating diesel engine & component technology	9E003.e.1
Reconstructed replication competent forms of the 1918 pandemic influenza virus containing any portion of the coding regions of all eight gene segments	1C351.b.1
Recording equipment, analog & digital tape recorders	3A002.a
Recovery of source code - software.....	5D001.c.2
Red dot sights.....	0A987
Reduced observables analysis software	1D103
Reduction gearing, light-weight marine transmissions.....	8A002.o.1.d
Reentry vehicles & equipment.....	9A116
Reentry vehicles/components, production equipment	9B115
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Description	ECCN Citation
Reflectivity (electromagnetic) reducing materials.....	1C101
Reflectometers, mirror characterization.....	7B102.b
Reflectors (mirrors), optical.....	6A004.a.1
Reflex sights.....	0A987
Refrigeration units, hydrogen or helium.....	1B231.b.1
Reinforced composite materials.....	1C007.f
Reinforcement fiber, production equipment.....	1B001.d
Release mechanisms, electronic.....	9A992, 9A610.h
Remote manipulators.....	2B225
Remotely operated vehicles.....	1A006.a
Remotely operated filling equipment, chemical.....	2B350.f
Remotely piloted vehicles (RPVs), non-military.....	9A012
Remotely controlled manipulators, for submersibles.....	8A002.i
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Resaturated pyrolyzed materials.....	1C102
Resin impregnated fiber prepregs for 9A110 items.....	9C110
Resin impregnated fibers.....	1C010.e
Resin (thermoset) impregnated continuous materials.....	1C210.c
Resin impregnated fiber prepregs, propulsion & space systems.....	9A110
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Resists (positive), semiconductor lithography.....	3C992
Resist material, coated (semiconductor) substrates.....	3C002
Restraint devices (electronic monitoring).....	3A981
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Reticles, integrated circuits of 3A001.....	3B001.g
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Reticle sights.....	0A987
Ricin.....	1C351.d.11
Rickettsia prowazekii.....	1C351.c.15
Rift Valley fever virus.....	1C351.a.29
Rinderpest virus.....	1C352.a.12
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Robot end-effectors.....	2B007
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Robot controllers.....	2B007

Description	ECCN Citation
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Robots, explosive/munitions environment handling.....	2B007.b
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Robots with real time 3D image processing or scene analysis	2B207
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Rocket engines, solid propellant	9A107
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Rocket motor inspection equipment	9B007
Rockets, sounding	9A104
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Rotor components, tooling for manufacture	9B009
Rotor fabrication/assembly equipment	2B228.a
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Rotor straightening equipment or systems.....	2B228.b
Routers, telecommunications.....	5A991.c.10
Ruby lasers.....	6A995.c
Russian Spring-Summer encephalitis virus	1C351.a.35
S-parameter test/measurement equipment	3B002.a
S20 and S25 photocathodes	6A002
Sabia.....	1C351.a.31
Safety cabinets, capable of biological use	2B352.f.2
Salmonella typhi	1C351.c.16
Salvage systems, ocean.....	8A001.e
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Satellite communication equipment technology.....	5E001.b.1
Satellite receivers	7A005
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Satellites, commercial communications.....	9A004

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Saxitoxin	1C351.d.12
Scanning cameras & systems.....	6A003.b.2
Scatterometers.....	7B002.a
Scatterometers, to characterize mirrors for laser gyro equipment	7B102.a
Sclerophthora rayssiae var. zae	1C354.b.8
Scramjet engines/components.....	9A011
Scuba gear	8A992.h
SDH (Synchronous Digital Hierarchy) technology	5E001.b.4
SDH (Synchronous Digital Hierachy) technology	5E991.a.2
Sea-induced motion control systems, automatic.....	8A002.n
Sealers (semi-automatic or automatic hot cap) for ceramic microcircuit packages.....	3B991.b.3.c
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Seals, aircraft/aerospace use	1A001.a, 9A610.x
Seals, for surface effect vessels	8A002.k
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Segmented mirrors, assembly in space	6A004.c.3
Seismic detection equipment	6A999.a
Semiconductor, test equipment.....	3B002
Semiconductor compound photocathodes	6A002.a.2.c.3
Semiconductor components, extended temperature range.....	3A001.a.2
Semiconductor component design software, computer-aided-design	3D003
Semiconductor device discrete testing equipment.....	3B992.b.4.a
Semiconductor device inspection or testing equipment and systems	3B992.b
Semiconductor device or material manufacturing equipment	3B001
Semiconductor devices manufacturing equipment and systems.....	3B991.b
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Semiconductor materials purifying or processing equipment	3B991.b.1.b
Semiconductor probing systems, electron & laser beam	3B002.d
Sensing devices (electronic)	6A002.a.2.a.2.b
Sensing elements, hydrophone	6A001.a.2.a
Sensing fibers, optical (not controlled by 6A002).....	6C992
Sensor materials, optical	6C002
Sensors, direction finding systems (passive)	7A115
Sensors, industrial infrared	6A002.a

Description	ECCN Citation
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Sensors, Micromachined Angular Rate	7A994
Sensors, multispectral imaging	6A002.b
Sensors, optical	6A992
Sensors, optical	6A002
Sensors, pressure (manganin & quartz)	6A226
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Separation mechanisms for missiles	9A117
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Separators, electromagnetic isotope.....	1B226
Servo valves, propellant control systems.....	9A106.d
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Shields, police.....	0A979
Shiga toxin	1C351.d.13
Shiga-like ribosome inactivating proteins other than verotoxin	1C351.d.17
Shiga toxin producing Escherichia coli (STEC) of serogroups O26, O45, O103, O104, O111,O121, O145, O157, and other shiga toxin producing serogroups	1C351.c.17
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Ship vessel positioning systems, acoustic.....	6A001.a.1.d
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Shock shields	0A985
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Shock tubes	1C018 or 1C992.c
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Shortwave radio technology	5E001.c.4.c
Shotgun shells	0A986
Shotgun shell manufacturing equipment	0B986
Shotgun shells, buckshot.....	0A984
and shotgun shells, technology for the development or production of	0E984
Shotguns, barrel length 18 inches or over.....	0A984
Shotgun trigger mechanisms, barrels, magazines, magazine extension tubes, receivers.....	0A984
Shrink fit machines for rotor fabrication/assembly	2B228.a
Side Scan Sonar designed for seabed imaging	6A001.a.1.a.3

Description	ECCN Citation
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Signal processor microcircuits.....	3A001.a.3 Note
Signal generators, frequency synthesizer based.....	3A002.d
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Signal processing (digital) transmission equipment.....	5A991.b.8
Signal processing equipment, sonar.....	6A001.a.1.d
Signal processing equipment.....	4A994.f
Signal processing equipment, general purpose digital.....	4A003
Signal processing equipment, hydrophone arrays.....	6A001.a.2.c
Signal tracking development/use technology, laser.....	5E001.b.2
Signature suppression devices, treatments & fittings.....	1C001
Signature (electromagnetic) reduction devices.....	1C001
Signature (electromagnetic) reduction devices.....	1A101
Signature suppression devices, treatments & fittings.....	1A101
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Silicon carbide (SiC) substrate blanks.....	6C004.d
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Silicone carbide wafers.....	3C005
Silicon-on-sapphire integrated circuits.....	3A001.a Note 2
Silicone fluid, fluorinated.....	1C006.b.2
Silver gallium selenide (AgGaSe ₂).....	6C004.b.2
Silylated resists for semiconductor lithography.....	3C002.d
Simulators for nuclear reactors.....	2A291.b
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Single crystal casting control software.....	9D004.c
Single crystal casting equipment.....	9B001.a, 9B619
Single crystals.....	6C002.b
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Single point diamond turning techniques, technology.....	6E003.d.2
Single-element & focal plane arrays, space-qualified.....	6A002.e
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Skin friction transducers, wall.....	9B008
Skirts, for surface effect vessels.....	8A002.k
Slapper detonators (Electric).....	1A007 or 3A232.a.3
Slurry propellant control systems.....	9A106.d
Small waterplane area vessels.....	8A001.i
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Sodium azide.....	1C992.1

Description	ECCN Citation
Sodium bifluoride	1C350.d.16
Sodium cyanide.....	1C350.d.17
Sodium fluoride	1C350.d.18
Sodium (Na) metal vapor lasers.....	6A005.b
Sodium sulphide.....	1C350.d.19
<i>Software, see product group D for controls in each category</i>	
Software, adaptive control	2D002.b.2
Software, adaptive control	2D992.a
Software, dedicated, for toxic gas monitoring systems and their dedicated detecting components controlled by 2B351	2D351
Software, electronic devices	2D002
Software, for coordinating function of multiple subsystems for use in missiles	9D105
Software, for portable electric generator development or production	2D994
Software for Nuclear materials, facilities and equipment.....	0D001
Software, numerical control.....	2D002 and 2D003
Software, real time processing in machine tools	2D002.b
Software, real time processing equipment operating systems	4D993.c
Software, recovery of source code.....	5D001.c.2
“Software” specially designed or modified for the “development”, “production” or “use” of equipment controlled by 2A983	2D983
“Software” specially designed for the "development" of the equipment controlled by 3A003.....	3D004
Solar cells, cell-interconnect-coverglass (CIC) assemblies, solar panels, and solar arrays (space qualified)	3A001.e.4 or 3A991
Solenoids, superconductive.....	3A001.e.3
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Solid rocket propulsion system, components.....	9A008
Solid rocket propulsion system, components.....	9A108
Solid state cameras.....	6A003.b.1
Solid state joining equipment, tools/dies/fixtures.....	9B004
Solid state imaging devices.....	6A203.b.3
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Sonar, active individual	6A001.a.1.e
Sonar processing equipment	6A001.a.2.b

Description	ECCN Citation
Sonar log equipment	6A001.b
Sonar, Side Scan Sonar (SSS) designed for seabed imaging.....	6A001.a.1.a.3
Sonar, Synthetic Aperture Sonar (SAS) designed for seabed imaging.....	6A001.a.1.a.3
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SONET (Synchronous Optical Network) technology.....	5E001.b.4
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Sounding rocket use software	9D101
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Source code automatic generation software	4D993.b
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Spark-gaps, triggered	3A228.b
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Spherical aluminum powder	1C111.a.1
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Spin forming machines	2B009
Spin forming machines	2B209
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Spin forming machines capable of flow-forming functions	2B209
Spin forming machines combining spin-forming and flow-forming function.....	2B009
Spindle assemblies	2B998.a
Spindle assemblies, machine tools.....	2B008.c
Spray booms or arrays of aerosol generating units, specially designed for fitting to aircraft, lighter than air vehicles,” or “UAVs”.....	2B352.i.2
Spray cooling thermal management systems.....	3A003
Spray-drying equipment capable of drying toxins or pathogenic microorganisms	2B352.f
Spraying or fogging systems, specially designed for fitting to aircraft, “lighter than air vehicles,” or “UAVs”	2B352.i.1
Spraying production equipment, plasma with controlled atmosphere.....	2B005.d
Spread spectrum development technology techniques	5E001.b.4

Description	ECCN Citation
Spread spectrum radio equipment.....	5A001.b.3
Spread spectrum spreading code generation.....	5A002.a.5
Spryttron tubes, vacuum	3A228.a
Sputter deposition production equipment.....	2B005.e
Sputtering equipment, magnetically enhanced	3B991.b.1.f
SQUIDs (Superconducting quantum interference devices).....	6A006.a.1
Staging mechanisms for missiles.....	9A117
Stainless steel plate	1C999.b
Staphylococcus aureus enterotoxins, hemolysin alpha toxin, and toxic shock syndrome toxin (formerly known as Staphylococcus enterotoxin F).....	1C351.d.14
‘Star trackers’ and components therefor.....	7A004
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Steel, maraging	1C116
Steel, Titanium-stabilized duplex stainless (Ti-DSS).....	1C118
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Stirling cycle engine, air independent.....	8A002.j.4
St. Louis encephalitis virus.....	1C351.a.34
Storage & holding vessels, critically safe & resistant to nitric acid	0B006.e
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Storage tanks, chemical (capacity greater than 100 L).....	2B350.c
Stored program controlled (SPC) switching equipment.....	5A991.c
Stored program controlled (SPC) switching equipment, equipment for the development of equipment employing.....	5B001.b
Stored program controlled (SPC) switching equipment, software for the development of equipment employing	5D001.d
Stored program controlled (SPC) switching equipment, technology for the development of equipment employing	5E001.c
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Streak cameras, mechanical or electronic.....	6A003.a.3
Streak tubes, electronic streak cameras	6A203.b.1
Streak cameras, electronic type.....	6A203.b.1
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Description	ECCN Citation
Structural composites production equipment	1B101
Structures and composite structures, laminate, and manufacturers for missiles.....	9A110
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Substrates, hard surface coated.....	3B991.b.2.b.1
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Substrates, semiconductor with resist coating	3C002
Substrates with at least one epitaxial layer of silicon carbide, gallium nitride, aluminum nitride or aluminum gallium nitride	3C006
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Super-ventilated propellers	8A002.o.1.a
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Supercavitating propellers	8A002.o.1.a
Supercomputers, see Computers	
Superconducting quantum interference devices (SQUIDs).....	6A006.a.1
Superconductive composite conductor	1C005
Superconductive gates, current switching.....	3A001.d.1
Superconductive electromagnetic sensors	6A996.b
Superconductive electromagnets or solenoids	3A201.b
Superconductive electromagnets or solenoids	3A001.e.3
Superconductive devices or circuits.....	3A001.d
Superconductive quantum interference devices (SQUIDs)	6A006.a.1
Superconductive propulsion engines	8A002.o.2.c
Superconductive electromagnetic sensors	6A996
Superconductive electronic device technology.....	3E003.c
Superplastic forming technology, metal working	2E003.b.1.a
Superplastic forming tools, dies, molds or fixtures	1B003
Superplastic forming technology/data, Al/Ti/Super alloys.....	2E003.b.2.a
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Description	ECCN Citation
Surface coating & processing equipment	2B005
Surface skimming (shallow bulk) acoustic wave devices.....	3A001.c.1
Surface acoustic wave devices.....	3A001.c.1
Surface vessel positioning systems, acoustic.....	6A001.a.1.d
Surface vessels & components.....	8A001
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Surface-effect vehicles, (fully skirted variety)	8A002.k
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Surreptitious interception devices.....	5A980
Surreptitious interception systems and equipment	5A001.f
Surreptitious interception systems and equipment, software for.....	5D001 or 5D980
Surreptitious interception systems and equipment, technology for.....	5E001 or 5E980
Survey equipment, surface vessel.....	6A001.a.1.a.1
Survey equipment, underwater	6A001.a.1.a.2
Survey systems or transmitting and receiving arrays, bathymetric	6A001.a.1.b
Swine fever virus (African)	1C352.a.1
Swine fever virus (Hog cholera virus).....	1C352.a.7
Switch fabric development/production technology	5A991.c.10
Switch-terminal interfaces	5A991.c.2.a
Switching devices, modules or assemblies	3A228
Switching equipment, stored program controlled.....	5A991.c
Synchronous Digital Hierarchy (SDH) technology	5E001.b.4
Synchronous Digital Hierarchy (SDH) technology	5E991.a.2
Synchronous Optical Network technology (SONET).....	5E001.b.4
Synchronous Optical Network technology (SONET).....	5E991.a.2
Synchytrium endobioticum.....	1C354.b.9
Syntactic foam, underwater use	8C001
Synthetic crystalline laser host material	6C005
Synthetic diamond material	6C004.f
Synthetic aperture radar (SAR).....	6A008.d
Systolic array computers/assemblies/components.....	4A004.a
T-2 toxin.....	1C351.d.15
Tanks, austenitic stainless steel.....	2B999.n
Tanks, chemical storage (capacity greater than 100 L)	2B350.c
Tanks, monel.....	2B999.f
Tanks, stainless steel.....	2B999.g
Tank turret rings and sprockets induction hardening machines.....	2B018.m
Tank turret bearing grinding machines	2B018.s
Tantalum crucibles coated with tantalum carbide/nitride/boride.....	2A225.c
Tantalum made or lined crucibles.....	2A225.b

Description	ECCN Citation
Tape designed for testing recording equipment of entry 3A002a.....	3A002.a
Tape bonders, stored program controlled equipment	3B991.b.3.b
Tape recording equipment	3A002.a
Tape-laying machines	1B101.b
Tape-laying machines	1B001.b
Tar sands	1C981
Tear gas	1A984
<i>Technology, see product group E for controls for each category.</i>	
Technology, airborne equipment	7E004.a
Technology, development of frequency hopping techniques	5E001.b.4
Technology, development of spread spectrum techniques	5E001.b.4
Technology, diamond substrate film.....	3E003.d
Technology, gas turbine engine components.....	9E003.c, 9E619
Technology, gas turbine engine components.....	9E003.a, 9E619
Technology, helicopter power transfer systems.....	9E003.d, 9E619
Technology, hetero-structure semiconductor development.....	3E003.b
Technology, high output type diesel engines.....	9E003.e
Technology, integration software for expert systems	2E003.e
Technology, machine tool instruction generators	2E003.d
“Technology” specially designed or modified for the “development”, “production” or “use” of equipment controlled by 2A983, or the “development” of software controlled by 2D983.....	2E983
Technology, superconductive electronic device	3E003.c
Technology, tilt rotor/wing power transfer systems development.....	9E003.d, 9E610.a
Technology, vacuum microelectronic device	3E003.a
TEGDN (Triethylene glycol dinitrate) propellant additive	1C111.c.2
Telecommunications equipment	5A001
Telecommunications equipment, high and low temperature tolerant.....	5A991.a
Telecommunication equipment not controlled by 5A001	5A991
Telecommunications equipment/system software	5D001.c.1
Telecommunications interception equipment.....	5A001.f
Telecommunication monitoring equipment.....	5A001.f
Telecommunication test, inspection and production equipment	5B001
Telecommunications test equipment.....	5B991
Telecommunications transmission equipment, equipment for the development of equipment employing	5B001.b
Telecommunications transmission equipment, software for the development of equipment employing	5D001.d
Telecommunications transmission equipment, technology for the development of equipment employing	5E001.c
Telemetry & telecontrol equipment for missiles.....	5A101

Description	ECCN Citation
Television cameras, underwater.....	8A002.d.1.b
Television systems (camera, lights, monitoring and signal transmission equipment), remote operation with submersible vehicle	8A992.a.1
Television cameras, underwater.....	8A002.d.1
Television cameras, underwater	8A002.d.1.a
Television cameras, underwater.....	8A992.a.2
Tellurium (Te).....	6C002.a
Tempest type equipment	5A002.a.4
Tension stretchers for prepregs/preform production	1B101.d
Terminal interface equipment	4A994.i
Terrestrial, marine acoustic equipment.....	6A991
Teschen disease virus.....	1C352.a.14
Test benches/stands, for rockets/motors/rocket engines	9B117
Test, calibration or alignment equipment for equipment controlled by 7A.....	7B001
Test chambers, aerosol challenge	2B352.g
Test equipment - propellants and their constituents	1B115
Test equipment - specially designed for testing finished or unfinished semiconductor devices	3B002
Test receivers, microwave	3A002.f
Test tape designed for recording equipment of entry 3A002a.....	3A002.a
Testing equipment, for electronic components.....	3B992.b.4
Test, inspection, development and production equipment for Category 5 items.....	5B
Tetrodotoxin.....	1C351.d.16
Thallium arsenic selenide (Tl ₃ AsSe ₃ or TAS)	6C004.b.3
Thecaphora solani	1C354.b.11
Thermal ionization mass spectrometers (TIMS).....	3A233.c
Thermal sensors, optical fiber.....	6A002.d.3
Thermoplastic liquid crystal copolymers.....	1C008.b
Thermoset resin impregnated materials	1C210.c
Thio-ethers, as lubricating fluids	1C006.b.1
Thiodiglycol.....	1C350.b.20
Thionyl chloride.....	1C350.c.8
Thrust tabs, thrust vector control subsystems	9A106.c
Thrust vector control sub-system.....	9A106.c
Thulium-YAG (Tm:YAG) lasers.....	6A005.c.1, c.2 or c.3
Thulium-YSGG (Tm:YSGG) lasers	6A005.c.1, c.2 or c.3
Thumbcuffs	0A983
Thumbscrews	0A983
Thyristor devices and modules, solid-state pulsed power switching.....	3A001.g
Tick-borne encephalitis virus (Far Eastern subtype, formerly known as Russian Spring-Summer encephalitis virus)	1C351.a.35

Description	ECCN Citation
Tick-borne encephalitis virus (Siberian subtype, formerly known as West Siberian virus)	1C351.b.3
Tilletia indica	1C354.b.10
Tilt rotor/tilt wing power transfer system technology	9E003.d, 9E610.a
Tilting spindles for machine tools.....	2B009.c
Time delay general, electronic equipment for	3A999.e
Time interval measurement, electronic equipment for	3A999.e
Time or frequency domain processing & correlation equipment	6A001.a.2.c
TIMS (Thermal ionization mass spectrometers).....	3A233.c
Titanium alloys	1C002.b.3
Titanium alloys, as tubes/solid forms/forgings	1C202.b
Titanium alloy/powder or particulate form	1C002.c.1.c
Titanium aluminides	1C002.a.2
Titanium-based alloys.....	1C002.b.3
Titanium doped sapphire laser host material	6C005.a
Titanium-sapphire (Ti: Al ₂ O ₃) lasers	6A005.c.1, c.2 or c.3
Titanium-stabilized duplex stainless steel 9Ti-DSS).....	1C118
TMETN (trimethylolethane trinitrate)	1C111.c.4
Tooling for powder metallurgy rotor component manufacture	9B009
Torpedo net	8A018
Torture, specially designed implements of	0A983
Tow-placement machines	1B001.g
Towed acoustic hydrophone arrays	6A001.a.2.b
Toxic gas monitoring systems	2B351
Toxins	1C350, 1C351, 1C355 or 1C395
Tracking radar	6A008.1.1
Tracking systems, precision	6A108.b.1
Tracking systems	6A008.1
Tractors and parts.....	9A990
Transceivers, radio.....	5A001.b.2 through 10
Transceivers, radio.....	5A991.b.6 or 7
Transcoders (translation encoders)	5A991.b Note a.6
Transducers, wall skin friction	9B008
Transducers, acoustic projectors.....	6A001.a.1.c
Transient recorders (Waveform digitizers).....	3A002.a.5 or 3A292.d
Transistor test equipment, S-parameter measurement	3B002.a
Transistors, microwave	3A001.b.3
Translation encoders (transcoders)	5A991.b Note a.6
Transmission fluids, automatic	1C980
Transmission equipment	5A991.b
Transmission equipment for Improvised Explosive Devices (IED).....	5A001.h

Description	ECCN Citation
Transmultiplex equipment	5A991.b Note a.9
Traveling wave tubes (TWTs), industrial	3A001.b.1.a
Tributyl phosphate	1C999.d
Triethanolamine	1C350.c.9
Triethanolamine hydrochloride.....	1C350.d.20
Triethyl phosphite	1C350.c.10
Triethylene glycol dinitrate (TEGDN).....	1C111.c.2
Triggered spark-gaps	3A228.b
Triggers, high voltage	3A999.c
Trimethyl phosphite	1C350.c.11
Tritium, compounds & mixtures.....	1C235
Tritium plant or facilities equipment	1B231.b
Tritium production recovery, extraction & concentration handling facilities or plant.....	1B231.a
Trusted Computer System Evaluation Criteria (TCSEC) capability	5A002.f
Tubes, gas krytron	3A228.a
Tubes, vacuum sprytron	3A228.a
Tunable band-pass filters	3A001.b.5
Tunable lasers	6A005.c
Tunable lasers, solid state	6A005.c.1, c.2 or c.3
Tungsten alloys	1C004
Tungsten alloy, parts.....	1C226
Tungsten carbide, parts	1C226
Tungsten & molybdenum metal & alloys.....	1C117
Tungsten, parts.....	1C226
Turbines for use in nuclear reactors.....	2A290.a
Turbines, aero gas engines, test software.....	9D004.b, 9D619
Turbines, gas aero engines	9A001, 9A619.a
Turbo prop engines	9A619.a
Turbocompound engines.....	9A101
Turboexpanders and turboexpander-compressors	1B232
Turbofan & turbojet engines, lightweight.....	9A101, 9A619
Turning machines for optical quality surfaces.....	2B992.a
Turning machines (CNC).....	2B991.d.1
Turning machines.....	2B201.c
Turning machines (CNC).....	2B001.a
TV cameras, radiation-hardened	6A203.c
TV cameras, radiation-hardened, not specified in 6A203	6A999.b
Two dimensional focal plane arrays	6A002.a.3
TWTs (Traveling Wave Tubes)	3A001.b.1.a
UAVs (non-military).....	9A012.a

Description	ECCN Citation
Ultrasonic test equipment for nuclear reactors	2A291.d
Underwater breathing apparatus, self-contained.....	8A992.h
Underwater cameras, photographic	8A002.d, e or f
Underwater camera equipment, n.e.s.....	8A992.d
Underwater communications systems.....	5A001.b.1
Underwater ElectroMagnetic Receivers (UEMR)	6A006.e
Underwater ElectroMagnetic Receivers (UEMR) software	6D003.f.3 or f.4
Underwater electric field sensors.....	6A006.b
Underwater lights.....	8A992.j
Underwater noise reduction technology	8E002
Underwater (propeller) noise reduction software	8D002
Underwater propulsion equipment.....	8A992.j
Underwater rebreathing apparatus	8A018.a
Underwater robots, computer controlled	8A002.h
Underwater sonar navigation systems	7A008
Underwater systems or equipment and parts, not controlled by 8A002	8A992
Underwater television cameras	8A992.a.2
Underwater vehicles, industrial	8A001
Underwater velocity measurement equipment.....	6A001.b
Underwater vessel positioning systems, acoustic	6A001.a.1.d
Underwater vision systems	8A002.d
Underwater vision systems	8A992.a
Unmanned aerial vehicles, not specified in 9A102	9A120, 9A610
Unmanned aerial vehicles and associated systems, production equipment.....	9B010, 9A610
Unmanned aerial vehicles, associated equipment, systems, and components.....	9A012.b, 9A610
Unmanned air vehicle systems (UAVs) Non-military.....	9A012.a
Unmanned tethered submersible vehicles.....	8A001.c
Unmanned untethered submersible vehicles.....	8A001.d
Uranium, depleted.....	1A290
Uranium titanium alloys	1C004
Vaccines and immunotoxins	1C991
Vacuum furnaces	2B226
Vacuum furnaces	2B227
Vacuum induction furnaces	2B226
Vacuum induction furnace, power supplies.....	2B226
Vacuum melting, remelt & casting furnaces.....	2B227
Vacuum microelectronic device development/production technology.....	3E003.a
Vacuum pumps	2B231
Vacuum pumps	2B350.i

Description	ECCN Citation
Vacuum tubes, electronic microwave	3A001.b.1
Vacuum sprytron tubes	3A228.a
Vacuum valves, piping, flanges, gaskets	2B999.k
Valve seats, made from fluoroelastomers	1A001.c
Valves, austenitic stainless steel	2B999.n
Valves, bellows seal	2A226
Valves, bellows	2B350.g
Valves, double-seal	2B350.g
Valves, of or lined with stainless steel, copper-nickel alloy or other alloy steel	2A292
Valves, diaphragm	2B350.g
Valves, monel	2B999.f
Valves, multiple seal incorporating a leak detection port	2B350.g
Valves, non-return (check)	2B350.g
Valves, stainless steel	2B999.g
Valves, vacuum	2B999.k
Variola virus	1C351.a.36
Vector processing unit technology	3E002
Vector processors/assemblies	4A003
Vehicle position determination software	6D103
Vehicles, specially designed or modified for military purposes	9A018.b
Velocity interferometers (VISARs)	6A225
Velocity measurement equipment, underwater	6A001.b
Venezuelan equine encephalitis virus	1C351.a.37
Ventilated full or half (protective clothing) suits	2B352.f.1
Ventilated propellers	8A002.o.1.a
Verocytotoxin producing E. coli (VTEC)	1C351.c.17
Verotoxin	1C351.d.17
Vesicular stomatitis virus	1C352.a.15
Vessels, austenitic stainless steel	2B999.n
Vessel positioning systems, acoustic	6A001.a.1.d
Vessel noise reduction equipment	8A002.o.3
Vessels, marine	8A001
Vessels, marine systems or equipment	8A992
Vessels, monel	2B999.f
Vessels, stainless steel	2B999.e
Vests, bulletproof & bullet resistant	1A005
Vibration test equipment, acoustic	9B006
Vibration test equipment, parts and components	9B990
Vibration test equipment using digital control techniques	2B116
Vibrio cholerae	1C351.c.19
Video cameras incorporating solid state sensors	6A003.b.1

Description	ECCN Citation
Vinylidene fluoride copolymers	1C009.a
Vinylidene fluoride copolymers, components of.....	1A001
virulans, fungi (Colletotrichum kahawae)	1C354.b.1
Virus protection software.....	5D992
Viruses	1C351, 1C352 or 1C353
Viruses, animal pathogens	1C352.a
Viruses, human pathogens	1C351.a
Viruses, plant pathogens	1C354.c
Viscous software, 2D or 3D engine flow modeling.....	9D004.a
Viscum Album Lectin 1 (Viscumin).....	1C351.d.18
Vision systems, underwater	8A992.a
Vision systems, underwater	8A002.d
Voice print identification and analysis equipment and parts	3A980
Volkensin toxin.....	1C351.d.19
Wafer handling systems, semiconductor	3B001.e
Wafer processing, semiconductor manufacture.....	3B001.e
Wafer probing equipment	3B992.b.3
Wafer production align and expose equipment	3B991.b.2.f
Wafers, semiconductor with function determined.....	3A001.a
Wafers, comprising multiple epitaxially grown layers	3C001
Wall skin friction transducers	9B008
War implement machinery, equipment, gear, and specially designed parts and accessories therefor	2B018
Water jet cutting machines (CNC).....	2B001.e.1.a
Water jet (pumpjet) propulsion systems	8A002.p
Water tunnels, propulsion model acoustic field measurement	8B001
Water-hydrogen sulphide exchange tray columns.....	1B229
Water-screw propellers	8A002.o.1
Wave division multiplex equipment	5A991.b.5
Waveform digitizers (Transient recorders).....	3A002.a.5
Wax pattern preparation equipment, ceramic shell	9B991.e
Weaving machines	1B001.c
Weight belts	8A992.i
Welders, MIG	2B999.d
Welders, E-beam.....	2B999.e
Welding machines, laser	2B999.c
Western equine encephalitis virus	1C351.a.38
Western red cedar, logs and timber.....	1C988
Wet-spinning equipment for refractory ceramics	1B101.c.3
Wet-spinning equipment for refractory ceramics	1B001.d.3
Wetsuits.....	8A992.i

Description	ECCN Citation
Wide-swath bathymetric survey systems.....	6A001.a.1
Wigglers (free electron laser magnet) manufacturing or inspection equipment.....	6B995.a.1
Wind tunnel aero-model technology.....	9E003.b.1
Wind tunnel, control systems.....	9B005
Wind tunnels, usable for missiles	9B105
Winding machines, fiber optic gyro coil.....	7B003
Windows, glass for nuclear radiation shielding.....	1A227
Work stations, as computers having a CTP above 260 Mtops	4A003.b
X-ray converters.....	1A999.b
X-ray equipment for projection image transfer	3B991.b.2.g
X-ray generators, radiographic	3A201.c
X-ray machines, flash	3A999.c
X-ray (non planar) inspection equipment, rocket motors	9B007
Xanthomonas albilineans	1C354.a.1
Xanthomonas axonopodis pv. citri (Xanthomonas campestris pv, citri A) (Xanthomonas campestris pv. citri).....	1C354.a.2
Xanthomonas oryzae.....	1C354.a.3
Xanthomonas oryzae pv. oryzae (syn. Pseudomonas campestris pv. oryzae)	1C354.a.3
Yellow fever virus.....	1C351.a.39
Yersinia pestis.....	1C351.c.20
Yttrium oxide (yttria) (Y ₂ O ₃), crucibles made or coated.....	2A225.a.8
Zinc germanium biphosphide	6C004.b.4
Zinc germanium diphosphide	6C004.b.4
Zinc germanium phosphide.....	6C004.b.4
Zinc selenide (ZnSe), substrate blanks	6C004.a
Zinc sulphide (ZnS), substrate blanks.....	6C004.a
Zirconium fluoride (ZrF ₄) glass	6C004.e
Zirconium metal particulate.....	1C111.a.2.a.1
Zirconium metal, alloy, compounds, or manufacturers	1C234
Zirconium oxide (zirconia) (ZrO ₂) made/coated crucibles.....	2A225.a.9
Zoonotic pathogens and “toxins”.....	1C351

Note: Prior to October 15, 2013, the CCL contained certain ECCNs that were only included as cross references to items subject to the export control regulations administered by the Nuclear Regulatory Commission. ECCNs formerly listed on the CCL that, as of October 15, 2013 were subject to the export licensing authority of the Nuclear Regulatory Commission at 10 CFR part 110 are: 0A001, 0B001, 0B002, 0B003, 0B004, 0B005, 0B006, 0C001, 0C002, 0C004, 0C005, 0C006, 0C201 and 1C012. See Section § 774.1(b) for additional information.